What is claimed is:

1. A control device for a hybrid compressor having compression chambers to compress refrigerant gas, a certain amount of liquid refrigerant in the compression chambers causing a maximum starting torque of the compressor, the compressor being selectively driven by a vehicle engine through an electromagnetic clutch and by a compressor electric motor, comprising:

a motor driver for driving the electric motor;

a clutch controller for driving the electromagnetic clutch, power being transmitted from the engine to the compressor when the electromagnetic clutch is connected, the clutch controller setting a connecting force of the electromagnetic clutch to transmit a second starting torque of the compressor; and

an engine drive timing controller electrically connected to the motor driver and the clutch controller, the engine drive timing controller commanding the motor driver to activate the electric motor to discharge the liquid refrigerant from the compression chambers to a predetermined level so that the compressor reduces its starting torque to the second starting torque before commanding the clutch controller to connect the electromagnetic clutch to transmit the power from the engine to the compressor.

2. The control device according to claim 1, wherein the connecting force of the electromagnetic clutch enables the transmission of slightly above a stationary

torque required for driving the compressor at a stationary operation state.

3. The control device according to claim 1, wherein the engine drive timing controller measures a predetermined amount of time from the onset of the driving of the compressor by the electric motor to commanding the clutch controller to connect the electromagnetic clutch.

4 The control device according to claim 1, wherein the engine drive timing controller commands the motor driver to stop the electric motor before commanding the clutch controller to connect the electromagnetic clutch.

5. The control device according to claim 4, wherein the electromagnetic clutch is connected when the compressor is in a stop state.

6. The control device according to claim 1, further comprising a judgment means electrically connected to the engine drive timing controller for judging whether or not the liquid refrigerant exists in the compression chambers, the engine drive timing controller commanding the motor driver to activate the electric motor to discharge the liquid refrigerant from the compression chambers when the judgment means judges that at least a predetermined amount of the liquid refrigerant exists in the compression chambers, the engine drive timing controller commanding the clutch controller to connect the electromagnetic clutch to

transmit the power from the engine to the compressor after discharging the liquid refrigerant.

7. The control device according to claim 1, wherein the electromagnetic clutch further comprising a first rotor and a second rotor that constitute a connecting portion of the electromagnetic clutch, the first rotor being connected to the engine and rotated in accordance with the rotation of the engine, the second rotor being connected to the compressor and rotated in accordance with the rotation of the compressor, the engine drive timing controller commanding the motor driver to drive the electric motor in such a manner that a rotational speed of the first rotor is substantially the same as that of the second rotor before commanding the clutch controller to connect the electromagnetic clutch.

8. The control device according to claim 7, wherein the engine drive timing controller commands the motor driver to stop the electric motor after commanding the clutch controller to connect the electromagnetic clutch.

9. A control device for a hybrid compressor having compression chambers to compress refrigerant gas, a certain amount of liquid refrigerant in the compression chambers causing a maximum starting torque of the compressor, comprising:

a first drive source for providing first power to the compressor;

an electromagnetic clutch for transmitting the first power from the first drive source to the compressor;

a second drive source for providing second power to the compression unit;

a second drive source driver for driving the second drive source;

a clutch controller for driving the electromagnetic clutch, the first power being transmitted from the first drive source to the compressor when the electromagnetic clutch is connected, the clutch controller setting a connecting force of the electromagnetic clutch to transmit a second starting torque of the compressor; and

a drive timing controller electrically connected to the second drive source driver and the clutch controller, the drive timing controller commanding the second drive source driver to activate the second drive source to discharge liquid refrigerant from the compression chambers of the compressor to a predetermined level so that the compressor reduces its starting torque the second starting torque before commanding the clutch controller to connect the electromagnetic clutch to transmit the first power.

10. The control device according to claim 9, wherein the first drive source is an engine for driving a vehicle.

11. The control device according to claim 9, wherein the second drive

source is an electric motor.

12. The control device according to claim 9, wherein the connecting force of the electromagnetic clutch enables the transmission of slightly above a stationary torque required for driving the compressor at a stationary operation state.

13. The control device according to claim 9, wherein the drive timing controller measures a predetermined amount of time from the onset of the driving of the compressor by the second drive source to commanding the clutch controller to connect the electromagnetic clutch.

14. The control device according to claim 9, wherein the drive timing controller commands the motor driver to stop the second drive source before commanding the clutch controller to connect the electromagnetic clutch.

15. The control device according to claim 14, wherein the electromagnetic clutch is connected when the compressor is in a stop state.

16. The control device according to claim 9, further comprising a judgment means electrically connected to the drive timing controller for judging whether or not the liquid refrigerant exists in the compression chambers, the drive timing controller commanding the motor driver to activate the second drive source to

discharge the liquid refrigerant from the compression chambers when the judgment means judges that at least a predetermined amount of the liquid refrigerant exists in the compression chambers, the drive timing controller commanding the clutch controller to connect the electromagnetic clutch to transmit the first power after discharging the liquid refrigerant.

17. The control device according to claim 9, wherein the electromagnetic clutch further comprising a first rotor and a second rotor that constitute a connecting portion of the electromagnetic clutch, the first rotor being connected to the first drive source and rotated in accordance with the rotation of the first drive source, the second rotor being connected to the compressor and rotated in accordance with the rotation of the compressor, the drive timing controller commanding the second drive source driver to drive the second drive source in such a manner that a rotational speed of the first rotor is substantially the same as that of the second rotor before commanding the clutch controller to connect the electromagnetic clutch.

18. The control device according to claim 17, wherein the drive timing controller commands the motor driver to stop the second drive source after commanding the clutch controller to connect the electromagnetic clutch.

19. A method for controlling a hybrid compressor in an air-conditioner

system from a stop state, the compressor having compression chambers for compressing refrigerant gas, a certain amount of liquid refrigerant in the compression chambers causing a maximum starting torque of the compressor, the compressor being selectively driven by a vehicle engine through an electromagnetic clutch and by a compressor electric motor, the method comprising the steps of:

setting a first value of electric current applied to the electromagnetic clutch to be smaller than a second value of the electric current that generates a connecting force of the electromagnetic clutch for transmitting the maximum starting torque of the compressor, the first value enabling the power transmission from the engine to the compressor at a second starting torque with the liquid refrigerant at a predetermined level in the compression chambers;

driving the compressor only by the electric motor from the stop state for a predetermined amount of time;

discharging the liquid refrigerant to the predetermined level from the compression chambers;

applying the first value of the electric current to the electromagnetic clutch; and

transmitting power from the engine to the compressor through the electromagnetic clutch.

20. The method according to claim 19, further comprising the steps of:

measuring a predetermined amount of time since the onset of the driving of the compressor only by the electric motor;

stopping the electric motor when the predetermined amount of time has elapsed; and

connecting the electromagnetic clutch after the stop of the electric motor.

21. The method according to claim 19, further comprising the step of maintaining the first value during a stationary state of the compressor.

22. The method according to claim 19, further comprising the step of starting the engine before driving the compressor by the electric motor.